

Louisiana Public Service Commission (LPSC)

RPF 14-20

**Monitoring and participation on behalf of the LPSC in MISO,
OMS and ERSC related matters**

Utilicast LLC Response

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1.0 EXECUTIVE SUMMARY

The objective of this section is to provide an overview of the proposal and the methodology to be employed. The Executive Summary will cover:

- Our qualifications, references and our ability to meet the Louisiana Public Service Commission's (LPSC) overall requirements;
- An overview of the qualifications and availability for the personnel expected to perform the review; and
- A description of why Utilicast should be selected for assisting the LPSC in monitoring and providing insight into MISO, OMS and ERSC issues.

Our Qualifications

Utilicast is uniquely qualified to understand all aspects of operating in and working with the MISO. We derive this qualification from having played a leading role in the development of MISO since its inception. Utilicast was the lead consultant in the implementation of the MISO Real-Time, Day-Ahead and Ancillary Services market as it is currently construed. Additionally, Utilicast played a key role in the integration of the MISO South region, which consists of the Entergy states. As well, Utilicast has played a role in the development of every other major ISO/RTO in the United States, including PJM, SPP, NYISO, ISO-NE, CAISO and ERCOT. There are few, if any, consulting firms that have the breadth and depth of knowledge of North American RTOs that Utilicast has.

Our Team

The Utilicast team consists of senior consultants with expertise and experience in all facets of the US RTOs and ISOs, including:

- Energy markets design;
- Real-time, Day-Ahead, Ancillary Services, and FTR/ARR operations;
- Transmission service;
- Transmission system design, analysis, and planning;
- Cost Allocation;
- Settlements systems and processes;
- Technical system architecture and integration.

The proposed work will be completed primarily by Mr. Ray Beaver and Ms. Julia Prybys, who have a combined 40+ years experience with electric utility issues and MISO markets specifically.

Additionally, subject matter experts will be utilized on an as-needed basis to supplement the team. The detailed resumes of each of the team members are included in Section 8 of this proposal, and a listing of relevant project experience is included in the References Section 6.

Our Value

Utilicast can provide efficiencies by utilizing a small, but very experienced project team. Our proposed consultants have worked with MISO and other ISO/RTOs to shape the current landscape of energy markets. The value is derived from having resources with the perfect backgrounds and experience to help identify and resolve issues that may escape less experienced consultants.

On this project specifically, we propose the use of two consultants with unique experience that directly benefits the LPSC. Mr. Beaver was a key consultant in the project to assist Cleco with its integration into the MISO market. His experience with Cleco, along with his experience in working with MISO Transmission Owners through the MISO governance structure, provides him with a unique viewpoint of all sides of the issues related to operating in the MISO environment.

Ms. Prybys played a key role in the development and delivery of training to MISO South/Entergy States new market participants during their integration into the MISO markets. This role along with previous roles provides Julia with knowledge of nearly all aspects of operating in the MISO system and provides her a unique insight into issues from both a high level and “in the weeds” view.

Further Utilicast will leverage its strong bench of subject matter experts who each bring to the table a detailed view of issues. Mr. Steve Reedy is an expert in the area of FTR/ARRs and has worked with Cleco. Mr. Jeff Fruit has multiple years experience with ISO/RTO settlement issues, having served as manager of MISO settlements in the past. Mr. Ken Maxwell was instrumental in the development of MISO Real-time pricing and is an expert at Seams related issues. Mr. Don Douglas has expertise in Transmission Planning and MISO’s Generation Interconnection process. Each of these team members may be called upon in a limited role to supplement the core team.

2.0 PROPOSED SOLUTION

2.1 Understanding of LPSC's Requirements:

The objective of this section is to confirm our understanding of the LPSC's requirements. We have reviewed the provided RFP 14-20 and realize the work required to complete this assignment. It is our understanding that the LPSC wishes to utilize outside expert(s) in helping the commission members monitor the MISO organization, the Organization of MISO States (OMS), the Entergy Regional States Committee (ERSC) and the Federal Energy Regulatory Commission (FERC) as it relates to MISO issues facing Louisiana utilities and rate payers.

The LPSC has a number of issues that are currently on its plate. The scope of the work would include supporting each of the following:

- Participation in meetings, working groups, and committees via phone or in person for MISO, OMS, ERSC, and FERC;
- Preparation of technical analyses for issues of importance to the LPSC with regard to Louisiana utilities' participation in MISO;
- Providing policy recommendations with respect to MISO issues that impact Louisiana rate payers;
- Providing regular updates and briefings to the LPSC on important MISO issues;
- Attendance of LPSC technical sessions;
- Assistance in preparation of briefings and filings;
- Testimony at LPSC Business and Executive sessions as needed.

The scope of the work above will encompass:

- Resource planning, resource adequacy and demand response;
- Utility cost recovery mechanisms;
- Regional transmission planning;
- RTO Day-Ahead, Real-time Energy and Operating Reserve markets;
- Transmission hedging;
- General transmission assets and operations;

-
- LPSC orders related to fuel cost recovery, Qualified Facilities, avoided cost, certification of transmission, certification of generation or power supply purchases, and competitive procurement of supply side resources;
 - FERC Orders governing Entergy, CLECO, and MISO;
 - Market forecasting and futures.
 - Federal environmental regulations impacting MISO operations

2.2 Approach, Methodology and Deliverables

The objective of this section is to describe how Utilicast will complete the project. More specifically, this section will:

- Describe the approach and methodology for meeting the LPSC's needs;
- Describe deliverables;

2.2.1 Approach and methodology

Utilicast proposes an initial face-to-face meeting with the LPSC in which “watch-list” issues will be identified and a schedule of meetings/subcommittees/working groups will be identified for Utilicast to monitor. Utilicast will then attend, either in person or remotely, each of these meetings. The goal for the Utilicast representative will be to monitor the meeting for Impacts, Obligations, and Opportunities.

Impacts – How does the discussion or outcome of the meeting impact the LPSC, its regulated utilities, and/or its rate payers with respect to policy, briefings or filings with the LPSC. How do technical issues with proposed rules or technology changes translate into LPSC policy?

Obligations – Does the outcome or discussions of the meeting commit the LPSC, Utilities, or rate payers to any new obligations, costs? And if so, what are the impacts from a technical and rate policy standpoint?

Opportunities – Is there an opportunity to influence the outcome of potential issues in a way that supports the LPSC view? Are new items on the horizon that the LPSC has not considered?

There are many times where a single issue will be discussed or debated among many different subcommittees or working groups within MISO. As well, many, if not all, of these same issues will be discussed and debated at OMS, ERSC and FERC meetings. As a result, summary reports on a meeting-by-meeting basis may not be the most efficient use of Utilicast time and LPSC/Rate Payer money. Please see the attached organizational chart depicting the many MISO Committees, Subcommittees and Working groups below. As the chart demonstrates the organizational structure can be complex. There are similar, if slightly less complex, organizational committees and working groups at OMS and ERSC.

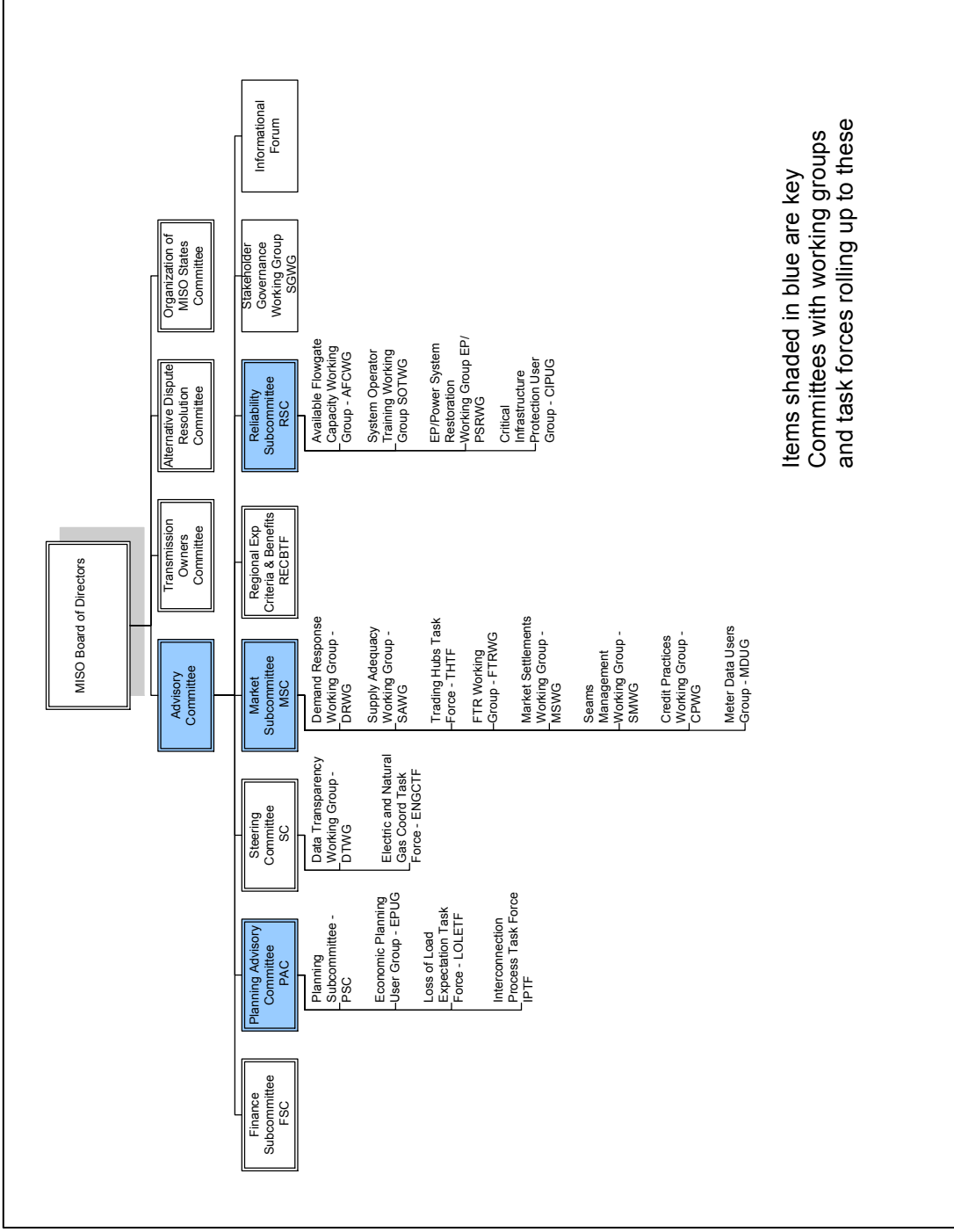


Table 1 MISO Governance

2.2.2 Deliverables

Utilicast proposes reporting on an issue-basis, rather than a meeting basis. We propose providing a monthly report packet that will summarize each of the identified issues and a breakdown of activities in the MISO/ERSC/OMS meetings for each issue, noting any Impacts or Obligations for the LPSC, its regulated utilities and the rate payers it represents.

However, Utilicast experience is broad enough that it will be able to identify potential new issues that may not be on the current watch list. So we will also identify potential new issues for the LPSC to consider.

We will also hold face-to-face updates with the LPSC on an as-needed basis at a frequency to be determined by the number and complexity of the issues under consideration at any time.

In addition to the Monthly Summary, Utilicast will also provide a monthly Tracking Calendar, detailing meeting and issue deliverables based on the priorities set by the LPSC. This will allow the LPSC to understand and plan for future issues and obligations.

Please see examples deliverables in section 7 below.

3.0 QUALIFICATIONS AND EXPERIENCE

3.1 Why is Utilicast Qualified?

Utilicast has more experience in understanding the intricacies of wholesale energy markets than nearly any other consulting firm in the US. We currently have consultants at every USA based ISO/RTO. We have played and continue to play leading roles at these ISO/RTO's including development of market rules, implementation of market systems, market participant outreach, market participant training. We have included in the reference section a list of many of our ISO/RTO projects.

Our specific MISO experience is directly related to the LPSC's needs and provides us an unmatched qualification for this project, as we will be able to leverage the experience and lessons learned from various projects. Included below is a list of the projects Utilicast has been involved with at MISO over the last 10 years.

- Lead consultant for the implementation of MISO's Day-Ahead, Real-Time and Ancillary Services markets.
- Lead consultant for Development and Delivery of Training Programs for Integration of MISO South Participants (Entergy States).
- Ongoing Market Analysis and Engineering Support.
- Project Management for implementation of upgrades to MISO's Dispatcher Training Simulator.
- Ongoing Power Engineering Support for Outage Coordination and Seams Administration.

However, to be the perfect candidate for the LPSC's needs, we need to understand not only the ISO/RTO perspective, but also the utility participant perspective. Utilicast also has a long list of projects that demonstrate this qualification. Utilicast assisted Cleco, Louisiana Electric Power Authority (LEPA), and Lafayette Utilities System (LUS) with their integration into MISO. Again, please see the references listed in section 6 below.

3.2 Team Member Bios

Below is a brief summary of the consultants proposed for this project. Detailed resumes are attached in Section 8 in this response.

3.2.1 Mr. Ray Beaver

Utility management teams seek out Ray's extensive knowledge and experience in regional energy markets and system operations to guide business decisions as they prepare for participation in regional energy markets. Ray has more than 30 years of experience in the electric utility industry, including leading the development and

management of transmission pricing zones as well as tariff administration for utilities participating in regional energy markets.

Currently Ray provides MISO meeting services to Hydro Quebec reporting the topics and issues in a variety of Stakeholder meetings and providing analysis as it impacts Hydro Quebec's trading organization. Prior to working with Hydro Quebec, Ray consulted for CLECO on RTO integration activities leading the Louisiana utility's successful integration into the MISO wholesale energy markets in 2013. Prior to his consulting career, Ray served as Senior Customer Advisor for the Midcontinent System Operator (MISO) for 8 years, providing customer support for several of MISO's key members, including transmission-owning utilities, power marketers, municipalities, cooperatives, and independent power producers. As a senior advisor on MISO's energy-only customer outreach team, Ray helped members develop processes and procedures for participation in the MISO energy-only market, implementing a collaborative model for market development and strategy. He served as the primary trainer for hundreds of market participants in the MISO region before, during and after MISO's energy market start-up in 2005.

Prior to MISO, Ray held management responsibilities in Transmission and Generation Operations, Regulatory Liaison, and Account Management at AEP in Fort Wayne, Indiana and Columbus, Ohio, where he managed the utility's OATT process for 5 years. He also held management positions at Santee Cooper in Monks Corner, South Carolina, and Ameren in St. Louis, Missouri.

A native of Indiana, Ray earned a Master of Business Administration degree and Bachelors of Science degree from Indiana Wesleyan University. He is a former NERC-certified Reliability Coordinator.

3.2.2 Ms. Julia Prybys

Julia Prybys has 17 years of consulting experience with over 14 years solely in the energy industry. Ms. Prybys specializes in working through complex issues to developing solution strategy with her clients and managing the implementation of complex programs. In her years consulting in the energy industry, Ms. Prybys has focused on expanding energy markets from assisting ISOs implement markets to helping market participants take full advantage of these new opportunities. With a deep knowledge of both functional and technical aspects of energy solutions, Ms. Prybys' projects have included areas such as, market participation and readiness, training, market design, operations, demand response programs, settlements, system/program implementation and regulatory compliance.

Ms. Prybys' professional experience includes projects at the following clients: MISO, Lincoln Electric Systems, ERCOT, Cinergy, Tri-State Generation and Transmission, ISO New England, Williams Energy Marketing and Reliant Energy.

Ms. Prybys has a Bachelor of Science degree in Management Information Systems from Florida State University.

3.2.3 Subject Matter Experts – Please see the attached resumes in section 8 of this response.

3.2.3.1 Jeff Fruit – Settlements

3.2.3.2 Ken Maxwell – Pricing and Seams

3.2.3.3 Steve Reedy – FTR/ARR/Hedging

3.2.3.4 Don Douglas – Transmission Issues

3.2.4 References for similar projects conducted / delivered by the Proposed Team

4.0 FEES

Utilicast proposes a single rate of \$195/hour plus expenses. Based on our understanding of the requirements, we make the following assumptions:

- Mr. Beaver and Ms. Prybys will be the primary consultants to monitor and participate in MISO meetings.
- Mr. Beaver lives in the Indianapolis area and will, therefore, minimize travel expenses for the Carmel-based MISO meetings.
- Only actual time, materials and expenses incurred will be charged to the LPSC.

5.0 CONFLICTS OF INTEREST

Utilicast recognizes the importance of disclosing and avoiding any conflict of interest in the course of our service to the LPSC. We are a pure solutions company, and we hold no interest in any company that could be construed as conflicting with the interests of LPSC. Utilicast does not represent, lobby on behalf of, provide legal services to, or have an interest in any company within the Entergy states region.

Utilicast would be unable to provide the LPSC with first-rate technical support if we did not have a technical work experience within the MISO footprint. The very experience that makes us the best solution for LPSC is the same experience that may be construed as a conflict of interest; specific consulting assignments include:

- Utilicast provides consulting services to Cleco – working to assist Cleco’s integration into MISO.
- Utilicast has provided consulting services to Lafayette Utilities System – working to assist LUS’s integration into MISO.
- Utilicast has provided consulting services to Louisiana Electric Power Authority – working to assist LEPA’s integration into MISO.
- Utilicast has provided and continues to provide consulting services to MISO in various technical roles.

However, we have several processes and procedures in place to eliminate this potential conflict. The primary structural process that will ensure elimination of conflicts of interest is the staffing model at Utilicast that prevents either Mr. Beaver or Ms. Prybys from working as a consultant for MISO or any utility regulated by the LPSC while they are assisting LPSC. Further, if required, all team members will sign a non-disclosure agreement (NDA) which will stipulate that no information gleaned from the team members’ participation in this project may be disclosed to any other Utilicast personnel.

6.0 REFERENCES

Client	Project Summary	Sponsors
Cleco Power LLC 2030 Donahue Ferry Road Pineville, LA 71360	<ol style="list-style-type: none"> 1. Assisted Cleco in the formation of a Financial Transmission Rights (FTR) desk/department. 2. Assisted Cleco with MISO Integration, including Operational Readiness assessment for business processes and information systems; Training on MISO market concepts; Strategy assessment and recommendations 	<p>Keith Crump Senior Vice President, Commercial Operations Email: keith.crump@cleco.com Office: (318) 484-7719</p> <p>Shane Hilton General Manager, Transmission Email: shane.hilton@cleco.com Office: (318) 484-4939</p>
Lafayette Utilities System 705 West University Avenue Lafayette, LA 70506	<ol style="list-style-type: none"> 1. Assist LUS with MISO Integration, including Operational Readiness assessment for business processes and information systems; Training on MISO market concepts; Strategy assessment and recommendations; IT infrastructure analysis and recommendations. 	<p>Edgar Rivera Director, Transmission Email: erivera@lus.org Office: (337) 291-5842</p> <p>Frank Ledoux Engineering, Power and Communications Manager Email: fredoux@lus.org Office: (337) 291-5838</p>
Louisiana Electric Power Association 210 Venture Way Lafayette, LA 70507	<ol style="list-style-type: none"> 1. Assist LEPA with MISO Integration, including Operational Readiness assessment for business processes and information systems; Training on MISO market concepts; Strategy assessment and recommendations; IT infrastructure analysis and recommendations. 	<p>Cordell Grand General Manager Email: grandca@lepa.com Office: (337) 269-4046</p> <p>Kevin Bihm Assistant General Manager Email: kbihm@lepa.com Office: (337) 962-5385</p>

Client	Project Summary	Sponsors
MISO 720 City Center Drive Carmel, IN 46032	<p>Over the last 10 years, Utilicast has worked with MISO and its Market Participants in a variety of areas, including:</p> <ol style="list-style-type: none"> 1. MISO South Integration – Training Program and Market Participant Readiness Program 2. Lead consultancy in the implementation of MISO's Ancillary Services Markets and Balancing Authority consolidation. 3. Integration of MidAmerican Energy, Entergy and other new members 4. Advanced Data Center 5. Synchrophasor Smart Grid implementation / Synchrophasors 6. Real Time Operations Project Management 7. Settlements Support 8. Energy Price Validation Market and Regulatory Enhancements 	<p>Todd Hillman Vice President, South Region Email: thillman@misoenergy.org Office: (501) 244-1503</p> <p>Doug Taylor Program Management Office Email: dtaylor@misoenergy.org Office: (317) 249-5616</p> <p>David Zwergel Director, Grid Operations Email: dzwergel@misoenergy.org Office: (317) 249-5452</p> <p>Kevin Larson Manager, Real Time Operations Email: klarson@misoenergy.org Office: (317) 249-5829</p>
Southwest Power Pool 415 N. McKinley Suite 800 Little Rock, AR 72205	<p>Since 2000, Utilicast has worked with SPP and its Market Participants.</p> <p>In 2009, 2 Utilicast consultants worked with SPP Market Participants to develop the Integrated Market rules.</p> <p>Today, Utilicast actively supports SPP's Integrated Market operations and back-office business areas.</p>	<p>Richard Dillon Director, Market Development Email: rdillon@spp.org Office: (501) 614-3228</p> <p>Lanny Nickels Vice President, Operations Email: lnickels@spp.org</p> <p>Philip Bruich Director, Settlements Email: pbruich@spp.org Office: (501) 614-3224</p> <p>Deborah James Manager, Markets Email: djames@spp.org Office: (501) 614-3577</p>

Client	Project Summary	Sponsors
Kansas City Power and Light 1200 Main Street Kansas City, MO 64106	<p>Utilicast provided a gap analysis across the organization to prepare them for joining an integrated market.</p> <p>Utilicast currently leads the Program Management Office and provides market and IT Subject Matter Expertise to prepare for the upcoming integrated market.</p>	<p>Charles King Director of Applications Email: Charles.king@kcpl.com</p> <p>Patty Denny Manager of Markets Email: patricia.denny@kcpl.com Office: (816) 654-1702</p>
Lincoln Electric System 2620 Fairfield Street Lincoln, NE 68501	<p>Utilicast provided a gap analysis across the organization to prepare them for joining an integrated market.</p>	<p>Dennis Florom, P.E. Manager Operations Email: dflorom@les.com Office: (402) 473-3384</p>
TXU Energy 6555 Sierra Drive Irving, TX 75039	<p>Utilicast supported TXU's Data Analytics and Data Integration capabilities within the ERCOT and Texas Retail Choice Markets.</p>	<p>Kevin Chase Chief Information Officer and Vice President Email: kevin.chase@txu.com Office: (972) 868-4827</p>
XCEL Energy 1800 Larimer Suite 1000 Denver, CO 80202	<p>In 2010 and 2011, Utilicast supported XCEL Energy's market formation strategy and wrote related Request for Proposal.</p>	<p>Stephen J. Beuning Director, Market Operations Email: Stephen.j.beuning@xcelenergy.com Office: (303) 571-2711</p>
PJM Interconnection 955 Jefferson Ave Norristown, PA 19403	<p>Over the last 4 years, Utilicast has supported PJM's development of its next-generation Balancing Authority capabilities.</p>	<p>Tom O'Brien Executive Director, IT Email: Obrien@pjm.com Office: (610) 666-8988</p> <p>Fran Barrett Advanced Control Center Executive Sponsor Email: barretfs@pjm.com Office: (610) 666-8888</p>
California ISO 151 Blue Ravine Road Folsom, CA 95630	<p>Over the last 4 years, Utilicast has worked with CAISO and its Market Participants on a variety of projects, including:</p> <ol style="list-style-type: none"> 1. Validation of Market Rules Compliance 2. Balancing Authority Cut-over for Day 2 Markets 3. Managed multiple Market enhancement projects 4. Network Model validation project <p>Managed California Smart Grid Projects</p>	<p>Heather Sanders Director, Smart Grid Email: hsanders@caiso.com Office: (916) 608-5850</p> <p>Janet Morris Director, Program Office Email: jmorris@caiso.com Office: (916) 747-7451</p>

Client	Project Summary	Sponsors
ERCOT 2705 West Lake Drive Taylor, TX 76574	<p>In 2008, the Public Utilities Commission of Texas and the ERCOT Board of Directors hired Utilicast to review the Texas Nodal Program scope, schedule, and status. The program was well over budget and years behind schedule. Utilicast was retained to provide analysis and plan for completion of the project.</p> <p>After a series of reviews, the board then asked Utilicast to lead several Nodal Market Implementation Teams.</p>	<p>Trip Doggett Chief Executive Officer Email: tdoggett@ercot.com Office: (512) 248-6260</p> <p>Bill Wullenjohn Director, Internal Audit Email: bwullenjohn@ercot.com Office: (512) 248-3165</p>
New York ISO 10 Krey Boulevard Rensselaer, NY 12144	<p>Over the last 2 years, Utilicast has been the lead consultancy for market operations. Projects have included:</p> <ol style="list-style-type: none"> 1. Tariff Review and reconciliation 2. Seams Agreement creation and implementation 3. Smart Grid Infrastructure Grant Project / Synchrophasors 	<p>Robert Pike Director, Market Operations Email: rpik@nyiso.com Office: (518) 356-6156</p> <p>Rana Mukerji Senior Vice President, Markets Email: rmukerji@nyiso.com Office: (518) 356-6000</p>

Table 3 - References

7.0 SAMPLE DELIVERABLES

Please see sample deliverables below:



7.1 Monthly Summary

Issue #	Commission Priority	Update Summary	Impacts	Obligations	Opportunities	Expected Resolution Date
1 - Winter Operations	Medium	Various MISO committees are evaluating the lessons learned in Winter Operations.	(1) Changes to DA planning process start time (2) Increased load management awareness (3) Input to development of reliability tools	Increased emphasis on Demand Response	(1) Potential to reduce gas purchase risk/hedging (2) Enhanced metrics for unit maintenance (3) MISO will have better information to evaluate post-event (4) Potential for DR setting price (5) Incentive for increased DR Resources	No resolution date set at this time
Issue #2	High/ Medium/ Low	Update Summary for Issue #2	Impacts of Issue #2 on Market Participants, Retail Customers and MISO	Obligations of Market Participants, Retail Customers and MISO based on Issue #2	Opportunities for Market Participants, Retail Customers and MISO based on Issue #3	Expected Resolution Date of Issue #2
Issue #3	High/ Medium/ Low	Update Summary for Issue #3	Impacts of Issue #3 on Market Participants, Retail Customers and MISO	Obligations of Market Participants, Retail Customers and MISO based on Issue #3	Opportunities for Market Participants, Retail Customers and MISO based on Issue #3	Expected Resolution Date of Issue #3
Issue #4	High/ Medium/ Low	Update Summary for Issue #4	Impacts of Issue #4 on Market Participants, Retail Customers and MISO	Obligations of Market Participants, Retail Customers and MISO based on Issue #4	Opportunities for Market Participants, Retail Customers and MISO based on Issue #4	Expected Resolution Date of Issue #4

This report will be a high level summary of each of the issues that are important to the LPSC.

7.2 Monthly Summary by Issue – Breakdown of activities related to a specific issue

Winter Operations: Lessons Learned	Electric & Gas Coordination	Demand Response	Unit Performance	Communications Procedures	Market Performance
MISO Committee/WG Assignment	Electric and Natural Gas Coordination Task Force (ENGCTF)	Supply Adequacy Working Group (SAWG)/Demand Response Working Group (DRWG)	Reliability Subcommittee (RSC)	Reliability Subcommittee (RSC)	Market Subcommittee (MSC)
Efforts Under Review	(1) Elec-Gas Coordinated field trial (2) Website for gas pipeline critical	(1) Voluntary Load Management (VLM) reporting enhancements (2) Should improve visibility for current and future operating days (3) Discussion in SAWG	Reviewing forced outages during extreme weather and Fuel	(1) Review of Emergency Operating Procedures (2) Review of EOP-002 and RA-OP-010 (3) Leverage Look Ahead Commitment tool during emergencies	(1) IMM recommendation, analyze the conceptual design of demand Under review
Solution/Results	(1) Allows open communication during event (2) Creating website (3) Stakeholder survey	Implemented June 2014	MISO implementing outage cause code changes to capture fuel related issues	Review of procedures and Coordination ongoing process	N/A
Implementation	Website being created to provide critical RT display of pipeline availability		Implement Cause Code Changes - Dec. 2014		
MP Impacts/Obligations	(1) Changes DA planning process start time. (2) Impact: Potential to reduce gas purchase risk/hedging	(1) Increased load management awareness (2) Increased emphasis on Demand Response	Enhanced metrics for unit performance	Input to development of reliability tools	Potential for DR setting price/incentive for increased DR Resources
MISO Impacts/Obligations	Provides for improved communications between Electric-Gas industry during events	(1) Visualization of gas supply and demand (2) Potential for additional Demand Response	MISO will have better information to evaluate post event	Expedited process for purchasing and selling emergency energy. Conditions	Potential to increase resource options during Emergency Conditions
Retail Customer Impact	Reduce volatility during extreme weather events	(1) Reduced volatility. (2) Potential increase in LMRs (generators, load control, etc.)	None	Reduce volatility during extreme weather events	Increase interest in providing Demand Response
Tariff/BPM Revision	Pending FERC NOPR	May require Tariff and BPM revisions	BPM will be revised	Update procedures	Tariff revision required
Regulatory Filings	FERC NOPR	Potential Tariff/State filings to modify dispatch of LMRs	None	May need Tariff revision to LAC tool	May require State Regulatory approval for Demand Response to participate
Stakeholder Input	Discussion in ENGCTF	Discussion in SAWG	Debated at RSC	Debated in RSC	Being reviewed in MSC

This report will be a breakdown of activities related to a specific issue. Utilicast will provide this summary for each issue we are tracking.

8.0 RESUMES

Please see resumes below:



Raymond F. Beaver

EXPERIENCE: Utilicast, Kirkland, WA

May 2012 – Current

Hydro Quebec Energy Services, Hartford, CT

March 2014-Present

Provide MISO stakeholder meeting services to capture issues and proposed solutions that impact Hydro Quebec trading operations.

Cleco, Pineville, LA

July 2012-July 2014

MISO Market Integration

- Encouraged shift in organizational culture to measure overall effectiveness alongside strategic objectives.
- Transmission service conversion and optimization including recently approved Tariff Formula Rate Plan Extension
- Developed Strategic Transmission Expansion Plan
- Managed day-to-day market integration activities as Subject Matter Expert:
- Market administration of day-ahead and real-time activities
- Joint-owned generation operation
- Reliability coordination and local balancing authority guidance
- Developed future state business process documentation

Cites of Conway, AR and West Memphis, TN

September 2012 – March 2013

MISO Market Integration

- Worked with the Cites to terminate Transmission Tariffs and dissolve their respective Balancing Authorities related to MISO integration. Developed LBA Agreement with Entergy to serve the Cities load and manage Joint Owned Generation resources.

NRG Energy, Princeton, NJ

August 2012 – December 2012

MISO Market Integration

- Conducted GAP analysis for NRG as they prepared to integrate into MISO's market. Analysis focused on numerous areas of the organization including:
- Optimizing transmission reservations in a regional market
- Managing Day-Ahead and Real-Time pricing divergence risk analysis
- Managing Resource Adequacy in a regional market
- Organizational training for resources engaged to manage assets in MISO

New York ISO, Albany, NY

May 2012 – December 2012

Synchrophasor project for Department of Energy

Developed comprehensive training plan addressing the needs of various departments responsible for successful deployment, administration and utilization of synchrophasor technology.

MISO Energy, Carmel, IN

July 2006 – April 2012

Senior Advisor, Customer Management

- Proactively managed core set of transmission owners and market participants to ensure their business objectives were met with regards to market knowledge and efficiencies. Provided member and customer support on all issues, particularly operational and market concerns
- Interacted with transmission owner senior management and regulatory groups providing opportunities for input to major policy developments working through the MISO stakeholder process
- Leadership role in the acquisition and integration of new transmission owners following the dissolution of MISOs contingency reserve share group. Led implementation team following Big Rivers Electric Corporation acceptance as a transmission owning member of MISO Energy
- Delivered training to customers leading up the implementation of MISOs Ancillary Service Market in January 2009

Ameren Energy Services, St. Louis, MO

March 2005 – June 2006

Market Performance Specialist

- Developed Transmission Load Zone Services to integrate Municipal, Cooperative and Retail Customers into the MISO energy market. Integration included development of Transmission Pricing Zones, Network Transmission Service, market training, and updating contracts and purchased power agreements to include market-based charges and financial transmission rights
- Represented Ameren Energy Services on multiple MISO stakeholder committees and working groups. Vice-Chair, FTR working group following the passage of the Energy Policy Act of 2005 requiring RTOs to implement long term transmission rights for load serving entities

Midwest ISO, Carmel, IN

August 2001 – March 2005

Manager, Customer Accounts

- Leadership role developing and staffing MISOs new Client Relations Department for customer outreach leading to the successful implementation of MISOs energy market in April 2005. Developed, implemented and delivered training for MISOs energy market, one of the largest wholesale energy markets in the nation. Training and outreach efforts included System Operations, Market Concepts and Hedging Instruments along with individual customer training for various segments with the industry

Lead, Tariff Administration

- As a member of the MISO start up team, instrumental in developing processes and procedures to ensure consistent application of Midwest ISO Tariff, Business Practices and systems that brought MISO on-line in February 2002
- Managed the Tariff Administration 24 hour real-time desk and day-ahead desk to ensure accurate, non-discriminating access to MISOs transmission grid providing wholesale energy across the MISO footprint
- NERC Certified Reliability Coordinator (certificate expired, 2008)

Santee Cooper Power, Moncks Corner, SC

July 1999 – July 2001

Financial Analyst III – Pricing and Competitive Intelligence

- Annual updates FERC OATT, retail, commercial and industrial rate tariff. Responsible for benchmarking Santee Cooper product offerings and incentive programs against other public power and investor owned utilities

American Electric Power, Columbus, OH

August 1983 – July 1999

Raymond F. Beaver (continued)

Manager, Interconnection Settlements

- Managed a team of analysts to accurately account for energy produced from AEP generators, off system sales, off system purchases and transmission usage across the tie-lines. Queried tie-line, generation and quantum meters daily to verify and balance energy schedules with interconnected entities. Validated transmission sales with OASIS to ensure transmission was not being overscheduled
- Directed the verification and invoicing of Transmission Service for all seven of AEPs operating companies.

Supervisor, System Operations Information and Billing, Ft. Wayne, IN

- Collected operating data to present a daily scorecard to operations and senior management. Invoiced large power (wholesale) accounts, managed GADS system and monthly production cost accounting including nuclear decommissioning journal entries

Operations Supervisor

- Supervised the three Indiana and Michigan regional dispatch groups responsible for monitoring the 765KV and 354KV transmission system including generation dispatch, outage coordination and system sales with neighboring utilities. Also included distribution operations during overnight and weekends

Power Plant and Station Operator, Fairbanks, IN

Plant operations and 765KV and 345KV substation operations

CORE

COMPETENCIES:

RTO Operations

Energy Markets

OATT Policy Development

Training

System Operations

Team Leadership

EDUCATION: Indiana Wesleyan University, Marion, IN

MBA - Finance

BS - Business Administration



Julia Prybys

Atlanta, Georgia • jprybys@utilicast.com

AREAS OF EXPERTISE

- Project Management
- System Development Lifecycle
- Knowledge Management
- Business Process Reengineering
- Change Management & Communications
- Budget and Resource Allocation
- Staff Training and Mentoring
- Training Development & Delivery

Select Career Highlights

- Led MISO South Integration training program, developed and delivered training to 4,300+ attendees (700+ individuals) from existing and new Market Participants, LBAs, consultants, vendors, law firms on MISO concepts processes and systems. Program consisted of 64 modules and 32 separate topics.
- Led the market readiness and stakeholder communications for executing the Market Day Simulation efforts for the MISO South Integration prior to the MISO South integration becoming financially binding.
- Project manager for the Integration of Aggregators of Retail Customers and Demand Response Resources into MISO market. Completed on a very aggressive schedule, under budget.
- Coordinated program, developed and delivered training to 1,000+ Midwest ISO Market Participants and employees on market rules for Energy Market launch and Ancillary Services Market launch at Midwest ISO
- Developed and maintained a long-term relationship with MISO, including market participants and key management, that led to 10+ years of consulting services
- Managed teams of varying sizes in critical client delivery, including over 14 years of project management across all phases of solution delivery
- Led internal review of communication mechanisms leveraged in the company, resulted in a formal decision making and communications protocols

PROFESSIONAL EXPERIENCE

Contractor at Midcontinent Independent System Operator (MISO)

MISO South Integration Training Manager

2011 – March 2014

In her role as the Integration Training Lead for the MISO South Integration, Ms. Prybys led the development and delivery of training materials for all integration areas. This included 64 separate modules across 32 topics. Ms. Prybys worked across many different functional areas of MISO to develop progressive materials to cover concepts, processes, systems/tools and stakeholder expectations in participation. This effort allowed her to work closely with MISO managers and subject matter experts across the organization to develop accurate and timely training materials in areas such as Auction Revenue Rights and Transmission Revenue Rights, Capacity Markets, Energy and Operating Reserves, Market and Transmission Settlements, Real-Time Operations, Resource Adequacy, Transmission Planning (MTEP), Qualified Facilities, etc.

Ms. Prybys also led the stakeholder communications for executing the Market Day Simulation efforts. This included system and environment expectations and availability, issue management, outreach efforts and 1:1 sessions with individual entities to resolve any concerns prior to the market becoming financially binding.

Demand Response Project Manager

2009 - 2010

As a Smart Grid initiative mandated by FERC, served as the Project Manager charged with meeting the FERC order to integrate Aggregators of Retail Customers and other Demand Response Resources into the Midwest ISO wholesale market. Based on knowledge of the existing market rules and demand response programs, engaged all relevant areas of the market operator to meet these requirements. Functions impacted by this mandate included Legal, Market Engineering, Day-Ahead Operations, Real-Time Operations, Market Analysis, Customer Registration, Settlements, Modeling and Information Technology. Coordinated the requirements definition for all areas; including evaluation of impacts on 5 existing systems and the evaluation, selection, customization and integration of a new system. The project was budgeted at approximately \$3M and came in ahead of schedule and within 1% of budget.

The Structure Group; Director (2005-2009)/Senior Manager (2004)/Manager (2000-2003) 2000 - 2009
\$60M+ (North American revenue) international software and consulting company serving the deregulated energy industry. Integral player in energy market restructuring, designing solutions for system operator and wholesale market clients in North America.

Over a 9-year period, played a significant role in the growth of Structure from small, start-up boutique firm to an international company that at one time employed more than 300 professionals. Client and internal responsibilities included business development and project delivery. Progressed from a single client project to promotion to Director within five years and consistently delivered \$1M+ in sales (5-10% of total consulting revenue), achieving 50-55% margin and over \$500,000 EBIT.

Managed all aspects of the commercial relationship from identifying opportunities, establishing relationships, assessing needs, defining and pricing solutions, developing and presenting proposals, staffing and evaluating resources, negotiating contracts and managing receivables. Marketed a wide array of Structure's consulting services including system implementation, business process and procedures, project management, FERC and NERC compliance and organizational assessments. Possess both technical and functional experience in the entire project lifecycle, from initial account planning, scope projection, requirements definition, functional analyses, communication plans, vendor selection, system design, testing, implementation, readiness evaluation and training.

- Performed in a diverse range of delivery projects including project management; program readiness and impact assessment; system implementation; training program development and delivery; change management and communications; business process redesign; communication tool design and development; RTO benchmark studies; ISO market transition program coordination; organizational design/development.
- Participated in the recruitment, hiring, and orientation of more than 50 employees and championed the institution of a formal employee recognition and retention program.
- Doubled sales, from \$1M to over \$2M at Midwest ISO, leading to promotion as Director. Positioned Structure as a key vendor for a seven-year period.

~ Detailed project & program summary available upon request ~

Ciber (The Summit Group); Senior Consultant (1999-2000) / Consultant (1997-1999) 1997-2000
Global provider of technology and consulting services for both private and government sector clients

Experience highlights progression from initial role as developer to technical lead, culminating in assignment as project manager. Designed, customized, delivered, and implemented back-end supply chain software at client sites.

- Managed small teams in the design, customization and implementation of Warehousing Management Systems
- Managed comprehensive requirements phase to ensure successful integration with ERP systems, specifically including purchasing and billing systems.
- Served as primary client contact for project and issue management.
- Served as key troubleshooter to identify, manage and resolve software issues.

Clients included Sunglass Hut, Wallace's College Books, eCampus.com, Addison Wesley, BIC, United American Video and CommScope.

EDUCATION

Florida State University, Tallahassee, Florida
Bachelor of Science in Management Information Systems, 1997



Jeffrey M. Fruit

EXPERIENCE: Utilicast Consulting, Kirkland, WA
Principle Consultant

October 2006 – Present

Southwest Power Pool, Little Rock, AR

July 2011 - Present

- **Integrated Marketplace Markets/Settlements Analysis.** Led effort to identify issues (data and process born) between the SPP Market's and SPP Settlements systems prior to market launch.
- **Integrated Marketplace – Interim Manager of Day Ahead Markets.** Temporarily filled the role of Manager of Day Ahead Market. Lead team of Day Ahead Operators and Engineers through SPP's Integrated Marketplace Market Trials. Implemented process improvement and operator awareness tools which allowed the team to produce a better Day Ahead Market solution.
- **Integrated Marketplace - Settlements Test Lead.** Develop test approach, test plan, test schedule for SPP's new \$10M nodal market Settlement System. Coordinate Settlement Testing with Southwest Power Pool's nodal market program. Verification and validation of Alstom eterraSettlement system, PCI settlement system, and SPP developed systems for input data, financial schedules, meter data management.

California ISO, Folsom, CA

February 2010 - June 2011

- **Multi-Stage Generation Project Manager.** \$5m project to implement combined cycle bid and dispatch logic in the California ISO's nodal market. Large project with 100+ contributors and >40,000 hours of work. Managed four vendors (Siemens, ABB, Potomac Economics)
- **Capacity Procurement Mechanism Project Manager.** Project to enabled shifting of Capacity Obligations from derated resources to other available resources by participants.
- **Flexible Ramping Project Manager.** Project to provide small amount of additional dispatch bandwidth to accommodate real time changes in dispatch conditions.
- **Non-Resource Specific Resource Adequacy Project Manager.** Project to allow Resource Adequacy Resources located outside the physical California ISO footprint to provide default energy bids (as required for internal Resource Adequacy Resources).

Electric Reliability Council of Texas (ERCOT)

June 2009 – January 2010

- **Vendor-site Project Manager for ERCOT's vendor ABB, Inc.** Manage the ABB software development and engineering team of ~25 resources and total software budget of \$15 million.
- Define, Schedule and manage software patch deliverables for two ABB software applications: Market System and Outage Scheduler.
- Provide ERCOT's quality assurance and oversight at ABB's Santa Clara, CA offices.

Southwest Power Pool, Little Rock, AR

May 2008 – June 2009

- **Settlement subject matter expert** for the implementation of Areva's e-Tariff Settlement System. Manage and validate Areva's delivery schedule, issue resolution process, code quality and final product delivery. System Requirement Gathering, Design Review, Testing Strategy, and system Integration to upstream Siebel and OASIS systems.

California ISO, Folsom, CA

August 2007 – May 2008

- **Audited the traceability** of CAISO's Market Software Systems to the Federal Energy Regulatory Commission (FERC) Filed Tariff.
- **Established a traceability matrix** and database that documented the audit trail from Tariff citations to the software requirements and software test cases.
- **Tested the traceability** of over 10,000 requirements across the California ISO's market system software specifications for Bid Submission (SIBR), Day Ahead (MPM-RRD, IFM and RUC), Real-time (HASP and Dispatch), Post-Market Processing (MQS), and Congestion Revenue Rights (CRR). The deliverable provided assurance to CAISO's senior management and executives that the Market software was aligned with the Tariff. A detailed report identified areas where the software systems needed additional support in the filed Tariff language. Assisted the CAISO Legal Department in addressing the identified gaps.
- **Provided a letter of Certification** that was used by the CAISO Officer Team, Board of Directors and FERC as part of the body of evidence supporting overall market readiness.



Jeffrey M. Fruit

Southwest Power Pool, Little Rock, AR

October 2006 – June 2007

- **Implemented Pre-Settlement Data Validations.** Designed, created and implemented a set of data controls and tests of Market Settlement input data.
- **Implemented Meter Data validation processes and analysis toolset.** Designed, created and implemented a set of Meter Data analysis tools for the inspection, validation and approval of Settlement meter data.
- **Acted as strategic advisor to Southwest Power Pool's Director of Settlements.**
- **Developed toolset and analysis processes for Revenue Neutrality Analysis** allowing SPP to pinpoint cause of a \$1 million+ per day Non-Neutrality.
- **Led Dispute Resolution Team.** Based on Midwest ISO experience, implemented best practices processes and dispute resolution tactics. Advised SPP Leadership on appropriate dispute response language and actions.

Midwest ISO, Carmel, IN

2003 – 2006

Director of Settlements

- **Provide leadership for Market Settlements, Transmission Settlements, Market Quality, and Meter Data Management Departments** (4 Managers; 25 Staff; 18 Contractors).
- **Key player in launch of Midwest ISO's \$25 Billion Electricity Market** – System Implementation; Market Design and Tariff Development; Stakeholder Leadership and Negotiation.
- **Built excellent Stakeholder relationship/confidence** that was recognized at the July 2005 MISO Board of Directors' Meeting.
- **Built team from staff of 2 to 25** over a two year period through team building, executive buy-in and promotion.
- **Regularly interface with key regulatory staff at State and Federal levels** – provided education, testimony, and presentations.
- **Managed delivery of software projects** on or ahead of schedule with fewest defects of any Midwest ISO System.
- **Key player in market design of the Midwest ISO Market Rules and Settlement Charges** – member of 10 person internal team that was responsible for the Energy Market Rules.

Vectren Corporation, Evansville, IN

2002 – 2003

Senior Energy Trader

Henwood Energy Services, Inc., Sacramento, CA

1999 – 2002

Senior Project Manager

Chicago Board of Trade & Chicago Mercantile Exchange, Chicago, IL

1987 – 1999

Commodities and Futures Trader

- Comprehensive understanding and experience in all aspects of futures and commodity trading.

EDUCATION:

De Paul University, Chicago, IL

Master of Science, Finance (with Distinction)

University of Colorado, Boulder, CO

Bachelor of Science Economics



Kenneth L. Maxwell

EXPERIENCE: **Utilicast, Kirkland, WA**
 Senior Consultant

December 2008 – Present

MISO, Carmel, IN (formerly Midwest ISO)

January 2012 – Present

- Project Manager – providing project management for the implementation of a multi-million dollar, multi-phased capital project to construct a new technical environment and upgrade the primary application software for the MISO Dispatcher Training Simulator. This software incorporates MISO's Energy Management System (EMS) and Market Systems in a simulation environment to train operators in a realistic setting. The role includes business case, application requirements, budget and schedule development; project management for environment build-out and application development and testing; budget, schedule and scope management; project reporting.
- Training Content Development – developed training presentation materials for MISO market participants and employees as a part of MISO's new member integration process in the areas of Generation Interconnection Queue process, OASIS and Interchange Scheduling, Transmission Planning, Transmission Modeling Tools, and Reliability Planning.
- Project Manager and Subject Matter Expert – provided project management and subject matter expertise on MISO/PJM Market-to-Market issues, including development of metrics to verify efficiency of the M2M software as well as the development of procedures to conduct daily verification of M2M events.
- Subject Matter Expert – provided subject matter expertise on Biennial Review report. This report is a follow-up to the MISO/PJM JOA Baseline Review issued in January, 2012 and is intended to assess all changes to processes, procedures, and information technology systems that may impact adherence to the Joint Operating Agreement between MISO and PJM since the issuance of the original JOA Baseline Review report.

MISO, Carmel, IN/PJM Interconnection, Valley Forge, PA

September 2011 – January 2012

- Subject Matter Expert – Provided subject matter expertise and participated on a team that authored a FERC mandated report on the effectiveness of MISO/PJM Joint Operating Agreement. This report, the "JOA Baseline Review," investigated MISO and PJM processes and procedures to verify compliance with tariff language and recommended changes to those procedures where needed.

Kansas City Power & Light, Kansas City, MO

May 2011 – August 2011

- Project Manager – Provided project management for the review of Kansas City Power and Light Company's (KCP&L) readiness to participate in Southwest Power Pool's (SPP) Integrated Marketplace (IM). This assessment included identifying industry best-practices and conducting a best-practice gap analysis; recommending software solutions; assessing the need for a data warehouse; and providing a project plan for implantation of recommendations to meet the SPP IM go-live date. This role included project management of a diverse, geographically dispersed team; budget, schedule and scope management; and project reporting.

MISO, Carmel, IN

September 2009 – June 2011

- Project Manager – provided project management for the implementation of multiple capital projects related to MISO's Real Time Operations Department. These projects included the implementation of a new Transient Security Assessment Tool, implementation of a Wind Resource Visualization Tool, and implementation of improvements to the Dispatch Training Simulator (EMS and Market Systems). This role included project management; budget, schedule and scope management; project reporting.

Utilicast, Kirkland, WA

February 2009 – September 2009

- Business Process Improvement – supported the redesign and improvement of Utilicast business processes including implementation of a new, more robust email system, document management system, expense reporting process and the systematic roll-out of these process and software changes.

formulas, development of configuration files which translate tariff formulas into program level calculations, unit testing and post-delivery support.

Black & Veatch, Overland Park, KS
Manager

October 2006 – November 2008

Ercot, Taylor, TX

October 2006 – September 2007

- Zonal Market Operations, Subject Matter Expert and Manager – Served as subject matter expert in the area of settlements and billing for the Ercot zonal market during Ercot's transition to a nodal market design. This project entailed thorough understanding of zonal market protocols as well as the training and daily supervision of a team of junior consultants. The team of junior consultants was tasked with performing daily settlement and billing activities in lieu of Ercot full-time employees, who were dedicated to nodal market design activities.

Ercot, Taylor, TX

October 2007 – September 2008

- Nodal Market Design, Settlement Expert - Led a team of 8 employees in the design, coding, testing, and implementation of a shadow settlement system for the Ercot nodal market. This project included scope, schedule, and risk management as well as a thorough understanding of nodal protocols and coding concepts for large software implementations.
- Led a team of 3 in the development of processes and procedures for the Ercot nodal market, producing process flow diagrams and step-by-step procedure documentation for each settlement task in the nodal market.

Ercot, Taylor, TX

October 2008 – November 2008

- Nodal Market Design, Settlement Expert - Served as business owner and subject matter expert in the functional testing of Lodestar code for the settlement of the Ercot nodal market. This project included development of test data, software defect tracking and management, version/environment propagation, and coordination with upstream and downstream systems.

MISO, Carmel, IN
Senior Market Analyst

September 2003 – October 2006

- Served as subject matter expert and business owner for the functional testing of Areva market clearing software that calculates real-time locational marginal price (LMP) for the MISO real-time market. This project included the development of software requirements, development of test data, defect tracking, and consultation with the software vendor on changes to the LMP calculation algorithm to limit price volatility issues related to transmission constraints.
- Served as project manager for the development and implementation of market monitoring software for the MISO independent market monitor (Potomac Economics). This project involved the coordination of efforts by an off-site market monitor to develop, implement, and test market clearing software that runs in parallel with the MISO market clearing software and is used in the determination of market power of participants.
- Managed the activities of a team of 4 in the validation of LMPs for the real-time market. This project involved the day-to-day management of a team whose responsibility is to ensure MISO real-time LMPs are accurate and complete. The team provides 24/7 support to resolve technical issues and completes daily validation activities.
- Managed the development of stand-alone LMP monitor software. This software essentially monitors the software that calculates real time LMPs for the MISO market. It provides reports of LMP calculations that fall outside pre-determined ranges and provides pager alerts when prices are suspect. The implementation of this software allowed the market pricing verification team to provide 24/7 monitoring coverage with only 4 full-time employees and increased the efficiency of the investigation and correction of suspect prices.

Accenture, Atlanta, GA
Consultant, Utilities Practice

May 2001 – May 2003

Nashville Electric Service, Nashville, TN

June 2002 – May 2003

- Developed process and procedures for a large municipal electric utility in the area of transmission and distribution work management and asset management. The utility had not updated its work or asset management systems or philosophies for many years. The project was to install a new tool and to redesign processes and procedures in coordination with the new software tool.

NiSource, Merrillville, IN

March 2002 – May 2002

- Conducted economic benchmarking of the various gas subsidiaries for NiSource related to its acquisition of Columbia Gas. The outcome of this benchmarking study provided insight and evidence towards efficiencies that could be gained and identified areas of improvement.

National Grid, Westborough, MA and Syracuse, NY

June 2002 – May 2003

- Performed merger integration benchmarking studies for the integration of National Grid and Niagara Mohawk following the merger of the two companies.

GridSouth, Charlotte, NC

June 2001 – May 2002

- Managed of team of 3 in the development of the transmission planning department of a regional transmission organization. Deliverables for this project included a project schedule, job descriptions, and process and procedure design.

Cinergy (now Duke Energy), Plainfield, IN
Engineer and Project Manager

May 1991 – May 2001

- Managed the implementation and construction of fiber optics projects, including budget, schedule, and construction management.
- Performed planning studies for the transmission and distribution department – planning system improvements and capital projects to maintain transmission and distribution infrastructure.
- Designed transmission and distribution circuits and substations.

EDUCATION: **Indiana University, Bloomington, IN**
Master of Business Administration (MBA) – GPA-3.7

University of Evansville, Evansville, IN
BS Electrical Engineering – GPA-3.2. Nominated for outstanding Senior Design Project. Participated in co-operative education program.



Stephen D. Reedy

EXPERIENCE: Utilicast, LLC, Kirkland, WA

August 2012 – Present

Consultant

Sam Rayburn Municipal Power Authority

March 2013

Analyzed issues surrounding possible upgrade of a transmission line as related to upcoming MISO integration.

Louisiana Energy and Power Authority

March 2013

Provided analysis related to ARR and FTR positions after upcoming MISO integration.

AEP Energy Partners

January-February 2013

Analyzed congestion in West Texas (ERCOT market), and drafted market rule changes to lessen impact by making the market more efficient.

Cleco Power LLC

November 2012 - present

Assisted Cleco in the transition to the MISO market:

Developed Back Office Business Processes and detailed data interfaces

Wrote white papers detailing bidding strategies, meter data requirements, Schedule 24, MISO admin fees, and contract pricing.

Provided FTRWG meeting analysis and support.

Assisted in search for FTR Analyst.

Adjusted settlements simulator to reflect Cleco business needs.

NRG

August – October 2012

Co-wrote gap analysis for integration into MISO market focusing on FTR/ARR, LBA issues, Market and Transmission Settlements and other smaller issues.

Developed settlements simulator to allow NRG to predict and understand MISO settlements under different circumstances.

Energytics, Austin, TX

October 2011 – August 2012

Director of Product Development

Developed market analytic products for Energytics, a market research firm with a focus on the ERCOT markets. Energytics flagship analytic products predict congestion in the ERCOT markets.

Electric Reliability Council of Texas, Taylor, TX

July 2007 – October 2011

Manager, Congestion Revenue Rights

August 2010 – October 2011

I led the Congestion Revenue Rights (CRR) group through the implementation of the CRR market. The CRR group (a.k.a. Transmission Congestion Rights - TCRs) performed monthly and annual allocations and auctions of transmission line capacity that allowed market entities to hedge their day-ahead congestion risk. This work required extensive contact with market participants to explain market rules and ensure that they were participating properly. In addition I wrote many software requirements to ensure that the tool met our needs, and performed and directed significant data analysis of very large data sets to ensure that the software was implemented correctly. I also developed process flows and procedures for the CRR group's activities as well as internal data processing tools. In addition to the CRR work, I also worked within the Market Operations group to identify solutions to broader market problems, such as the incorrect application of energy weighted averaging to Real Time price calculation.

As CRR manager I was also responsible for typical managerial duties as well, like budgeting, recruitment and personnel development.

Manager, Market Analysis and Design

June 2010 – August 2010

I managed the Real Time Markets group and the Price Validation group as well as a group of Principal Engineers focused on Market Design issues. Although I was in the tenure for only a brief time, I resolved a major issue regarding the treatment of Options in the Day Ahead Market.

Supervisor, Congestion Revenue Rights

November 2008 – June 2010

As the supervisor of the CRR group I led the group as it operated the zonal Transmission Congestion Rights market and guided the Congestion Revenue Rights project through much of development and market trials.

Senior Engineer, Congestion Revenue Rights

July 2007 – November 2008

As a senior engineer in the CRR group I was responsible for various technical aspects of the development of the CRR market, most notably the development of the transmission model for the CRR market. I also ran the weekly market calls during market trials.

Austin Energy, Austin, TX

June 2006 – July 2007

Senior Engineer, Transmission Fault Investigation and Relay Programming

Electric Reliability Council of Texas, Taylor, TX

December 2004 – June 2006

Engineer/Senior Engineer, System Operations Planning

Applied Materials, Austin, TX/Richmond, VA/Rehovot, Israel

November 1996 – December 2004

Various Technical Training, Process Engineering, and Application Engineering roles

EDUCATION: University of Texas, Austin, TX

MS Electrical Engineering - Research assistant fellowship, Research Topic: Plasma Fusion.

Wabash College, Crawfordsville, IN

AB Physics – minors in Math and Spanish; studied in Colombia; held office and participated in numerous societies and clubs.

HOBBIES: Cycling, Boy Scouts (Cubmaster), Singing.



DON DOUGLAS

Management Consultant with over 35 years of diverse experience in electric utility transmission and distribution planning, engineering, operations and construction; electric market design; regulatory affairs; business development, management development; strategic planning; and IT management. Demonstrated leadership and consensus-building skills in leading teams of management, engineering and operations personnel from 15 large electric utilities and multiple consulting firms in development of a never-before-done joint venture to create a for-profit transmission company/RTO.

- Organizational Leadership
- Transmission Planning
- Transmission Design
- Transmission Operations
- ISO/RTO Integration
- NERC Standards/Compliance
- Procedures Development
- Renewable Energy Integration
- Strategic Planning
- External Affairs
- Business Development
- Consensus Building
- Multi-Party Coordination
- Team Building
- Process Review & Design
- Vendor Management

UTILICAST and others, Kirkland, WA

Management Consultant

10/2010 - Present

- Generation Interconnection and Transmission Expansion studies for New York ISO.
- Consulting for electric utilities in the Southwest and Midwest.
 - Entergy region - ISO/RTO integration.
 - NERC Reliability Standards compliance and development of Transmission Operations procedures.
 - Renewable energy integration and smart grid.
- Consulting for operations start-up, expansion and process improvement.

COMPOSITE TECHNOLOGY CORP / CTC CABLE CORP, Irvine, CA

3/2009 to 10/2010

Vice President – External Affairs / Vice President – Business Development

- Built industry awareness for and acceptance of advanced HTLS transmission technology among electric utility executives, federal and state legislators and regulators and various interest groups.
- Led and coordinated Government Relations activity.
- Developed strategies and plans to influence federal and state legislation and policies affecting CTC business interests.
- Developed and implemented external affairs strategies aligned with and supportive of the overall business strategy.

SENEGENCE INTERNATIONAL, Newport Beach, CA

2004 to 2/2008

A twenty million dollar ecommerce, direct sales cosmetics company

Vice President – Systems, Services & Operations

- Managed IT, Operations and Customer Service activities for ecommerce, direct sales cosmetics company.
- Reduced IT budget by 30% while creating new systems and improving service to internal and external customers.
- Reduced Customer Service staff by 20% and improved service through implementation of new technology.

GRIDAMERICA, Cleveland, OH

2002 to 2004

A company formed to manage and possibly own the transmission assets of three large Midwest electric utilities (including FirstEnergy) with the Midwest ISO after the Federal Energy Regulatory Commission denied the Alliance RTO application.

Sr. Consultant

- Provided expertise for GridAmerica in design of Midwest ISO electricity market, representing the interests of transmission-owning companies.
- Led development of operational protocols detailing roles of GridAmerica, three transmission-owning members and the Midwest ISO.

FIRSTENERGY CORP/CENTERIOR ENERGY CORP/CEI, Cleveland, OH

1971 to 2002

A large electric utility formed in the merger of the Centerior Energy Corp and Ohio Edison. Cleveland Electric Illuminating Company (CEI) and Toledo Edison Company had previously merged to form Centerior.

Planning Development Manager for Alliance BridgeCo, Washington, DC and Columbus OH

A company formed to create a for-profit company to manage and possibly own the transmission assets of as many as fifteen large electric utilities from Michigan to Florida.

- Employee of FirstEnergy on loan to BridgeCo 2001 to 2002 to manage development of the Transmission Planning Function for the Alliance RTO.
- Working closely with CEO and three other Development Managers, led the transformation from nine individual Transmission Owning utilities to the single Alliance RTO. Utilities saved at least \$500,000 over using a consultant and gained benefit of having utility experience in the leadership role.
- Facilitated discussions among Executives of member companies in developing consensus for policies and strategies.
- Chaired the Planning Working Group in proposing functionality and structure of the Alliance Transmission and Operations Planning Function.
- Led development of transmission planning function for Alliance Bridgeco.
- Coordinated Alliance efforts to satisfy federally mandated Inter-RTO Cooperation Agreement with MISO and PJM.
- Worked closely with state and federal regulatory agencies, utility regulatory affairs groups, and customer special interest groups

Various Engineering and Strategic Planning Management Positions – Centerior/FirstEnergy.

- Established the new Centerior T&D Engineering activity which would work with, and ultimately replace the existing parallel organizations at CEI and Toledo Edison, including: developing new practices and procedures for sharing and dividing engineering responsibilities; devising methods for budgeting and allocating costs; consolidating engineering activities and personnel from two operating companies to one service company; streamlining activities, and reducing personnel and costs, and increasing productivity and profitability.
- Managed and directed the activities of up to 50 engineers and technicians at a time.
- Led strategic planning activity, including major initiatives such as electric generation cost containment and efficiency improvement studies and implementation.
- Led review of electric utility industry restructuring proposals and activities, and developed strategies for Centerior.
- Managed construction and maintenance service center with over 50 service employees, dozens of vehicles and equipment, and a budget of several million dollars.
- Trained numerous management personnel.
- Represented Centerior on multiple industry committees and panels.
- Served as Centerior's spokesman for Electric & Magnetic Fields (EMF) health issues.
- Member of executive committee for initial development of the Midwest ISO (MISO).
- Member of executive committee (Secretary) for development of Alliance RTO proposal to FERC.

Progressive Engineering and Management Positions - Cleveland Electric Illuminating Company

- Directed development of engineering, standards & specifications, equipment selection and support to operations for all CEI underground and overhead transmission and subtransmission lines.
- Managed field design of all overhead distribution and subtransmission facilities for Cleveland.
- Responsible for transmission line siting, coordination of need and environmental analysis reports, conducting public awareness and education programs and providing expert testimony for ten years (1975 – 1985).
- Design engineer for overhead and underground T&D facilities. Developed equipment and design standards and specs.

MBA – Finance and Marketing

Case Western Reserve University, Cleveland, OH

BSEE

Purdue University – West Lafayette, IN